

WORK PACKAGE 1 WORK PLAN
HISTORICAL DATA QUALITY REVIEW AND IDENTIFICATION OF PRELIMINARY
CONSTITUENTS OF POTENTIAL CONCERN

PATRICK BAYOU SUPERFUND SITE
REMEDIAL INVESTIGATION
DEER PARK, TEXAS

Prepared for

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June 2006



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1 INTRODUCTION

This Work Package 1 Work Plan provides the approach and scope of work for the final validation and verification of existing environmental data related to the Patrick Bayou Superfund Site (Site). This Work Package is the first in a series of proposed Work Packages for the Site under a phased or adaptive management Remedial Investigation/Feasibility Study (RI/FS) approach being conducted by the Patrick Bayou Joint Defense Group (JDG) under an Administrative Order on Consent with the U.S. Environmental Protection Agency (USEPA), Region 6. The full Remedial Investigation Work Plan that outlines the adaptive management approach for the RI/FS at Patrick Bayou is in development; however, the JDG and its RI contractor believe the work proposed in this Work Package will facilitate development of future Sampling and Analysis Plans (SAPs) and should be implemented as soon as practical.

A significant amount of data from previous investigations exists for the Site and the goal of the proposed scope of work is to ensure that those data are incorporated into the RI/FS process to the maximum extent practical using USEPA guidance on data quality and control. After the data are validated, a scoping-level risk assessment is recommended to identify Constituents of Potential Concern (COPC) and Preliminary Data Quality Objectives (DQO). The development of these parameters will provide focus to future Work Plans and field efforts as the project moves forward in the Site RI.

2 SCOPE OF WORK

In order to evaluate the appropriateness of the existing data for subsequent RI/FS evaluations, the following tasks are proposed.

2.1 Task 1 – Existing Data Quality Review and Validation

2.1.1 Task 1a – Establish Performance and Acceptance Criteria for Existing Data

This planning task includes the development of performance and acceptance criteria for existing data, including setting specific requirements for reviewing, describing, evaluating, categorizing, and documenting the existing data for the purposes of the RI/FS, primarily for use in risk assessment. Temporal and spatial limits for the application of performance and acceptance criteria for each media (e.g., sediment, surface water, and biota) will be established. Performance criteria, specific requirements, and temporal/spatial limits on verification and validation efforts will be documented in an Interim Technical Memorandum for JDG and agency review. Comments will be addressed in a Draft Final Technical Memorandum.

2.1.2 Task 1b – Database Verification and Validation

Data verification and validation of the existing database will be performed. The goal of this task is to ensure and document that the data are what they purport to be, that is, that the reported results reflect the work as it was actually accomplished. This task will evaluate and document whether, and to what degree, the specific performance and acceptance criteria established in the previous task are met.

Data from each study will be evaluated based on the USEPA's data usability in risk assessment criteria (USEPA 1992). The following USEPA criteria address major data quality issues that impact data usability:

- Documentation
- Data sources
- Analytical methods and detection limits
- Data review
- Data quality indicators

This task will include updating the project database to ensure that proper quality assurance/quality control (QA/QC) documentation exist for data that may be used as part of the risk assessment process.

2.1.3 Task 1c – Summary of Existing Information Verification and Validation

A technical memorandum summarizing the data quality review will be prepared and submitted to the JDG and the agencies and will include a summary of the Task 1b data verification and validation, documentation of data that was populated into the database, exceptions and issues (e.g., high detection limits and missing information), and statistical summaries.

2.1.4 Task 1 Deliverables

The following deliverables will be submitted as part of Task 1:

- Draft Interim Technical Memorandum
- Draft Final Technical Memorandum
- Final Technical Memorandum
- Updated Site Database

2.2 Task 2 – Identification of Preliminary Contaminants of Potential Concern from Existing Data and Development of Data Quality Objectives

Preliminary COPC from the existing data and Preliminary DQO will be identified for collection of additional data for abiotic media (e.g., sediment and surface water) in order to refine the conceptual site model (CSM), including exposure assessment and pathways, distribution of Site contaminants, and potential remedial goal options.

2.2.1 Task 2a – Identification of Preliminary Contaminants of Potential Concern

This task will identify Preliminary COPC from the substantial amount of existing data for the Site. Existing data will be addressed by what may be termed a ‘scoping’ risk assessment. This scoping risk assessment will be an interim tool to assist in the risk assessment process, with the intent to facilitate a better understanding of the CSM. It will be conducted using conservative exposure assumptions, with the purpose of identifying key exposure pathways on which to focus more detailed analyses and identifying potential data gaps.

The approach will use relatively simple risk-based approaches to quantitatively and qualitatively evaluate the existing data in a risk assessment framework. Exposure pathways and receptor groups identified in the *Preliminary Site Characterization Report* (PSCR; Anchor 2006) and as amended by Agency comments will be considered during development of Preliminary COPC. Preliminary COPC may not be developed for each ecological receptor group identified in the PSCR due to data gaps critical to their evaluation or because of a lack of toxicity data. In such cases, a qualitative evaluation may be performed.

Prior to characterizing risks using the existing data, an Interim Technical Memorandum will be provided to the JDG and agencies summarizing the exposure pathways, receptors, and assessment endpoints to be considered and present specific methods for identifying Preliminary COPC for each assessment endpoint.

The results of this scoping risk assessment will be used to help facilitate discussions about the Site, but not to limit pathways or receptors. Any future limitations of COPCs, receptors, and/or pathways will be discussed with the agencies prior to that decision.

2.2.2 Task 2b – Development of Preliminary DQOs for Additional Data Collection

Preliminary Data Quality Objectives will be proposed to assist in the development of the SAPs for the collection of additional data to address apparent data needs, refine the CSM, and develop the Risk Assessment Work Plan. Much of the basis for the proposed DQOs were addressed to some degree in the PSCR (Anchor 2006) and will be incorporated into the proposed DQO. It is expected that the results of the work that will be described in Task 1 (above) will also be available for development of Preliminary DQOs.

The benefit of using this process is to incorporate a systematic, common-sense approach to data collection and to ensure that the level of detail in planning is commensurate with the importance and intended use of the work and available resources (USEPA 2000). Primarily, the DQO process will help focus data collection activities that are consistent and complimentary with previous investigations and that will adequately address the

most apparent data needs for subsequent planning activities (e.g., Risk Assessment Work Plan).

The Draft Technical Memorandum will propose a set of Preliminary DQOs for review by the JDG and agencies. Comments and input will be addressed and incorporated into a Final Technical Memorandum. It is expected that the results of this effort will be incorporated into future SAPs.

2.2.3 Deliverables

The following deliverables will be provided as a part of Task 2:

- Draft Interim Technical Memorandum
- Draft Final Technical Memorandum
- Final Technical Memorandum

3 ESTIMATED SCHEDULE

Assuming USEPA approval of the work proposed in this letter by August 3, 2006, Anchor will provide the final draft report to the JDG and USEPA on or before September 19, 2006. This schedule assumes that Anchor will begin work during USEPA's review of the RI Work Plan.

4 REFERENCES

Anchor. 2006. Preliminary Site Characterization Report. Patrick Bayou Superfund Site, Deer Park, Texas. Prepared for USEPA and the Patrick Bayou Joint Defense Group. Prepared by Anchor Environmental, L.L.C. May 2006.

USEPA. 1992. Guidance for data usability in risk assessment. Part A. Final. Publication 9285.7-09A. Office of Emergency and Remedial Response. Washington DC.

USEPA. 2000. Guidance for the Data Quality Objective process. EPA QA/G-4. Office of Information. Washington DC.